

Senate Testimony on the Magnuson-Stevens Fishery Conservation and Management Act -- April 10, 2000

**Patrick J. Sullivan
Cornell University
Department of Natural Resources
Ithaca, New York**

Our marine ecosystems are complex and dynamic. They represent an important source of food, commerce, recreation, scientific inspiration, and culture. What we don't often realize when we attempt to manage these systems is that they are quite variable and not readily subject to hard and fast rules of oversight. The conventional maximum sustainable yield (MSY) theory of several decades ago is too risky to employ in this uncertain environment. It was developed with the concept of optimal production in a controlled setting. The control we exercise in the marine environment is by no means complete. There is an element of chance present not only in how populations change from year to year, but also in how we track and interact with those changes. We should try to understand, first and foremost, that there will always be risk in decision making in fisheries, even when the best available information is used. But we should also recognize that increasing the information we have at hand for decision making reduces our risk. We must develop more robust management objectives that take into account this uncertainty. And we need to adjust our expectations to recognize the multiple uses that are being made of these resources. What is positive for decision makers and stakeholders is that both fisheries scientists and fishermen are getting better at gathering and analyzing information about marine ecosystems. What is interesting, but often goes unnoticed, is that the information fishermen and scientists each gather reflects differences in perspective, in scale, in experience,

and in value. And while these differences have led to problems in communication between scientists and fishermen, to the consternation of many managers, one should recognize that complementary sources of information are reflected in these perspectives and if combined could lead to a greater understanding of our fisheries and of marine ecosystems in general. I think the benefit to the nation would be great if fishermen and scientists could learn to better communicate and share this valuable information.

How might this be brought about? I think a dialogue needs to take place between stakeholders, fishermen in particular, and fisheries and marine scientists. The dialogue needs to take place in a neutral setting and outside of the contentious arena surrounding quota setting. In this regard the handbook “Reauthorizing the Magnuson-Stevens Fishery Conservation and Management Act” produced by the H. John Heinz III Center under a program managed by Dr. Susan Hanna from Oregon State University provides a starting point and identifies the set of relevant issues and questions needed for such a dialogue to take place. I’ve included this document as part of my supplemental materials.

A lot has been made out of the idea of fishermen collecting data in collaboration with scientists. I have had some good experiences collaborating with fishermen while working with the International Pacific Halibut Commission on board longline fishing vessels chartered for halibut survey work. Such collaborations facilitated data gathering at reduced costs to the IPHC, which owns no survey vessels, and also provided a venue for fishermen and scientists like myself to share ideas and gain perspective from one another. I think such associations should be promoted when possible, but it also should be recognized that not all data can be

collected in this fashion. Longline fishing effort tends to be gear specific and so can be controlled from vessel to vessel, whereas trawling effort used to assess many fisheries is a function not only of gear, but of towing speed, engine capacity, and vessel size, making vessel-to-vessel standardization difficult. This is why it is appropriate for the National Marine Fisheries Service (NMFS) to use their own research vessels for standardized trawl surveys for fish stock assessments in the Pacific and the Atlantic. Nevertheless, there still remains many opportunities for collaborative research including having fishermen on board NMFS survey vessels, having NMFS and other marine scientists on board commercial and recreational fishing vessels, and encouraging the development of special collaborative projects designed to test assumptions upon which stock assessment procedures are built. In particular, harvest data from commercial and recreational fishermen may be highly informative provided trust can be maintained between fishermen and the management agency and provided a high level of quality control is established. Technological innovations such as computerized logbooks, satellite vessel monitoring systems, and acoustic data collection are all likely to improve the precision and accuracy of data gathered by fishing vessels, and it would be a shame not to anticipate and make use of this.

In conclusion let me stress that there are a number of issues that I have not been able to touch upon here that need to be addressed during reauthorization including: problems associated with overfishing, capacity reduction, and bycatch; the usefulness of individual vessel quotas for some fisheries; and the need for social and economic data to improve fisheries management. For a good overview of these issues please refer to the recent marine fisheries reviews conducted by the National Research Council (NRC 1998a, 1998b, 1999a, 1999b). The greatest need, in my

opinion, is for good information and the ability to make wise use of it. Good communication among all parties is essential to this goal.

National Research Council. 1998a. Improving Fish Stock Assessments. National Academy Press, Washington, D.C.

National Research Council. 1998b. Review of Northeast Fishery Stock Assessments. National Academy Press, Washington, D.C.

National Research Council. 1999a. Sustaining Marine Fisheries. National Academy Press, Washington, D.C.

National Research Council. 1999b. Sharing the Fish: Toward a National Policy on Individual Fishing Quotas. National Academy Press, Washington, D.C.